Operable Unit 5

Aquifer Restoration Project

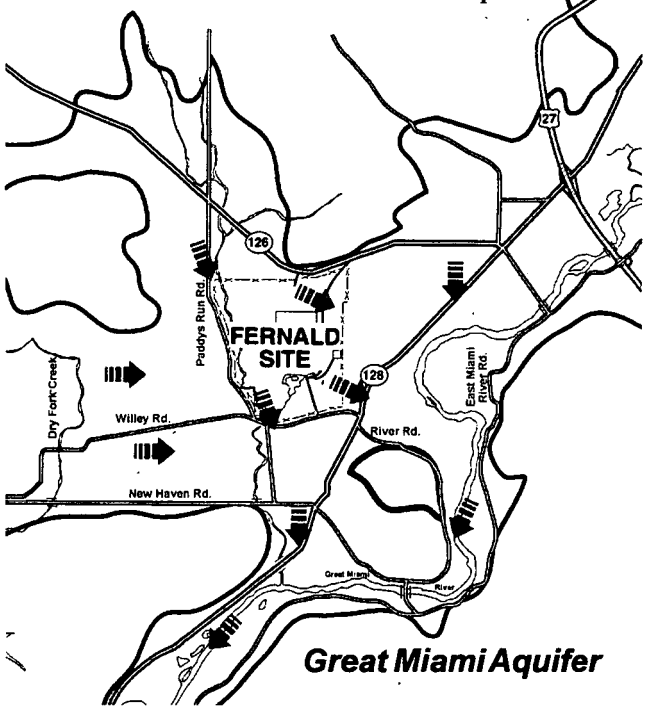
March 1997

Operable Unit 5

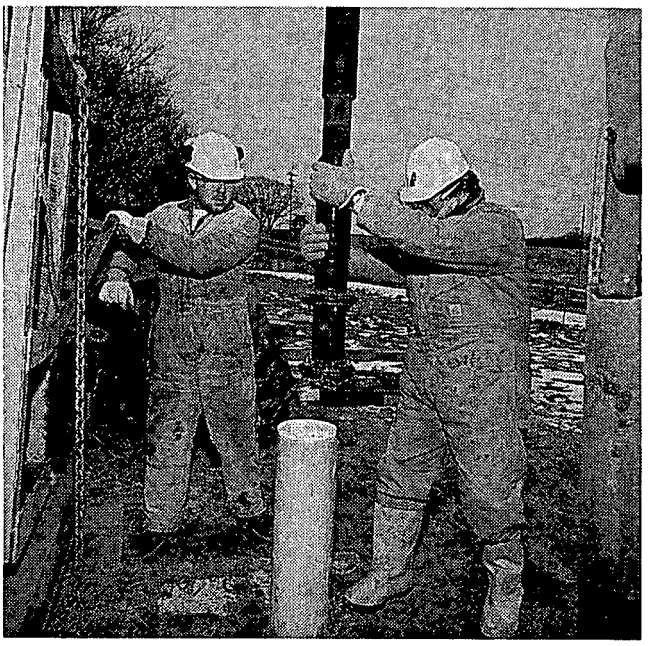
Operable Unit 5 is one of five areas being remediated at DOE's Fernald Environmental Management Project (FEMP). Each operable unit was defined based on its location or the potential for similar technologies to be used in the ultimate cleanup.

Selected Remedy for the Great Miami Aquifer

The remedy for the Great Miami Aquifer is announced in the *Record of Decision for Remedial Actions at Operable Unit 5* and was signed by the U.S. Environmental Protection Agency (EPA) on Jan. 31, 1996. Areas of the Great Miami Aquifer exceeding final remediation levels will be restored through extraction methods. DOE will investigate and apply, if appropriate, innovative technologies such as reinjection. It is anticipated that reinjection will help flush contamination to extraction wells and shorten the time needed to restore the aquifer.



Great Miami Aquifer



Drillers insert a surge block in preparation of a strategically placed extraction well, which will extract contaminated groundwater for processing at the FEMP's Advanced Wastewater Treatment Facility. The block is raised and lowered several times to help form a sand pack around the well screen (6501-31).

Remedial Design

In July, the draft *Final Remedial Design Work Plan for Remedial Actions at Operable Unit 5* was approved by the U.S. EPA and Ohio EPA. As required by the amended consent agreement, the remedial design work plan identifies overall design and strategy for remedy implementation and schedules for delivery of design documents to U.S. EPA. The Operable Unit 5 remedial design work plan fulfills this requirement.

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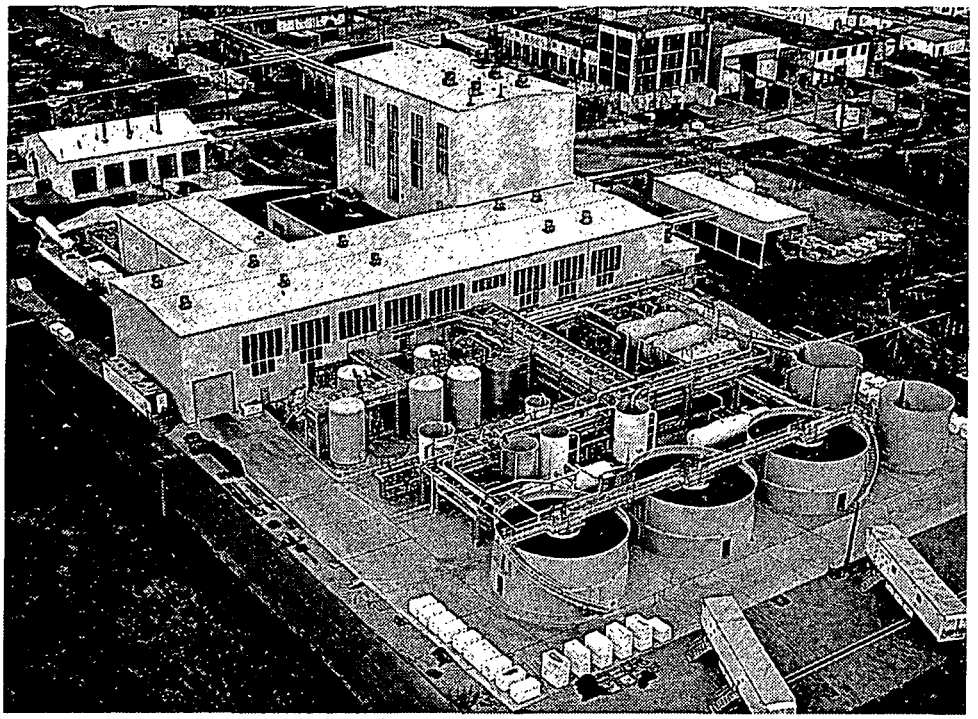

The Advanced Wastewater Treatment Facility currently treats contaminated groundwater at a rate of approximately 30 million gallons per month (6385-458).

Great Miami Aquifer Remedy Objectives
The five objectives of the Great Miami Aquifer remedial design process are to:

1) Accommodate the need for sequential restoration modules, each independently designed, installed and operated using "learn-as-you-go" principles over the life of the remedy;

2) Build enhancements into the remedy, as described by the Operable Unit 5 feasibility study report and record of decision;

3) Develop a solid remedial approach that has the potential to accomplish remedial action objectives within the aggressive time frames contained in Fernald's current funding baseline (10 years);

4) Accommodate transition of the existing groundwater extraction and treatment infrastructure and early-start actions with a coordinated site-wide final remedy; and

5) Satisfy discharge limits for the release of groundwater, stormwater, and remedial wastewater to the Great Miami River.

The remedy for the Great Miami Aquifer is unique in that major elements of the remedy have already been designed and implemented as a result of U.S.-EPA-approved early-start initiatives and groundwater-related removal actions. These elements include the Advanced Wastewater Treatment Facility (AWWT), the South Field Extraction System, and the South Plume Removal Action recovery well system. The remedial design process will build upon this existing infrastructure.

For More Information

For specific questions regarding Operable Unit 1, contact Rob Janke, DOE FEMP Operable Unit 5 branch chief, 513-648-3124; or send an e-mail message to Rob_Janke@fernald.gov.

For more information about the PEIC and its resources, call Rene Eichhold, 513-738-0164, or send an e-mail message to Rene_Eichhold@fernald.gov.